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The Free Gift

Master Of Fine Arts Thesis Production

By

Chia-Chi Cho

MFA Imaging Arts / Computer Animation

SCHOOL OF FILM AND ANIMATION

ROCHESTER INSTITUTE OF TECHNOLOGY

ROCHESTER, NEW YORK

November 2006

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Program: Film and Animation

College: Imaging Arts and Sciences

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Acknowledgement

The purpose of this paper is to give readers a quick review of my thesis movie, “The Free Gift”. It includes the process of making my movie, the problems I encountered, and how I solved them eventually. I was fortunate enough to have the opportunity to undergo intensive training in the School of Film and Animation (SOFA) at Rochester institute of Technology as a graduate student. I am very grateful to all my classmates in SOFA. With Studying with them, I learned not only animation knowledge and methods, but also wider view points and more international experience about film production.

First of all, I would like to thank my committee members. Thanks to my committee chair, Skip Battaglia, an international award winning filmmaker, who gave me great suggestions throughout the whole production of “The Free Gift”. During my time as a graduate student in Rochester Institute of Technology, Professor Skip Battaglia was a very influential teacher who taught me a variety of film production, scriptwriting, and music editing skills for my class projects. My appreciation also goes to the professor Duane Palyka and Aharon Charnov, who gave me the inspiration, shared their knowledge and 3D skills with me, and finally helped me to finish my movie. They played an important role in my extensive training and I am deeply thankful to them.

Concept and Story Idea

Several years ago I read an article which is about discussing the change of human beings in today’s modern society. In big cities, people seem to be close physically but the distance between people is very far that most people are unaware of. An quote from Leo Buscaglia mentioned, “Too often we underestimate the power of a

touch, a smile, a kind word, a listening ear, an honest compliment, or the smallest act of caring, all of which have the potential to turn a life around". These few sentences inspired me to create a movie which can bring people closer, to collide, and to make contact. In my movie "The Free Gift", the boy expressed his love and feelings to the girl in a witty way. Hopefully people who watched my movie will like to further express their true feelings to all the people in their lives, not only to their family, friends, or the persons they love.

Movie Title

"The Free Gift" is a story about love. The gift in this movie is a medium to express the boy's feelings to a girl. In addition, it is also a good start to tell the people who you like that you are still concerned about them.

Preproduction

Treatment

My original story is about the boy who falls in love with a girl at first sight and tries to find a way to express his love to her. The biggest problem of my story structure is that the conflicts apparently are too weak in this movie. I tried to create another sidekick character to bring these conflicts up and eventually come to the conclusion. The problems that need to be faced and solved by the protagonist are caused by this sidekick character. The interesting fact is that this sidekick character is also the key who helped the boy and the girl get together finally. This third character I added is very influential in building rising actions, climax, and falling actions for this movie. (See Appendix A for original treatment .)

Character Design and Aesthetics

Since the characters were set up as the employees who helped to promote Red Dragon's Café by delivery the flyers, I checked many Halloween costumes online as references. As to the design for the red dragon mask, I combined the images from the Chinese dragon and the western dragon, and then recreated a totally unique dragon image by my imagination. The design for the girl is a challenge for me. I was thinking about two types of clothing, modern and traditional ones when I was designing her. I finally made her more modern in look to fit in the Café scene.

Storyboarding

This movie includes over 50 shots to cover the whole storyline. Although the storyline is not complicated, there are many small events included in my movie. The camera positions I chose for the shots are mainly close shots. The reason is that facial expressions of the characters here play a very important role and the more audiences can see characters' expressions, the more and easier their emotions will be involved in the story. Also the timing for shots is very dramatic. The pace comes in slow, and little by little it speeds up until the conflicts appear, and then it slows down again until the end of the movie.

Production

Modeling

In “The Free Gift” I mainly used two powerful modeling methods: polygon and sub-D to build most of my characters and background. They made it easier to achieve a greater organic realism for my models. Another reason that I chose polygon is that it made my life much easier when I applied the textures to my models. I started the process of modeling the characters with the NURBS Curve Tool. After having the rough shape of the body parts built, I transferred them from NURBS to polygons. Then I made minor adjustments to the shapes of characters and combined them as well. After having my character assembled in one piece, I started to focus more on musculature and better definition of my characters’ body parts. I transferred polygon parts to sub-D to refine and add details in this mode. In the final modeling process I transferred sub-D back to polygons again to prepare for texturing.

During the modeling process I have learned many techniques in Maya, such as image plane preparation, Append to Polygon Tool, SubDivision Hierarchy, Polygon Proxy Modeling, surface conversion, mirroring, attaching, and a number of additional tips for modeling. 3D Modeling is a very time-consuming process and it needs a lot of patience. However, I was very enjoyable when I was modeling my characters and I was very happy with them when they were done.

Texturing

Before I created textures for my characters, I spent quite plenty of time to edit and clean my UV layouts for each model. A good UV layout also helps a lot to define and apply flawless textures to polygon models, resulting in phenomenal detail and accuracy. Besides, it saves a lot of time throughout the workflow. As to the

textures, I used PSD textures in Maya and then edited it in Photoshop. I also created many Bump Maps and Specular Maps on textures to make them look more realistic and increase more visual details. The window glass texture in my Café shop was a challenge. I tried to make it look transparent and clear, but on the other hand, I need that my audiences notice it as well. Therefore, I added some bluish color to the ambient color layer and added a glow on my glass texture. By this way the glass window became more vivid and noticeable. The overall colors I used in this movie are bright and cheery, which gave this movie more cartoony and comedic look.

Rigging

I used the smooth bind to rig all my characters. It looked much more natural when I animated them using the smooth bind than using the rigid bind. I simply built very basic skeleton rigs for them because I will export them to MotionBuilder for the animation part. It also saved me a significant amount of time on rigging and setting up my characters. The other tools and techniques I used during rigging process in Maya are clusters, Blend Shapes, skin weights and custom rig controls.

Animating

Facial expression played a very important role in my movie. Therefore I used many close shots in here. Another thing that I want to mention here is that I chose MotionBuilder, a very powerful animating program to do my animation instead of animating in Maya. I exported models from Maya and imported them to MotionBuilder, where they got rigged and animated. When the animations were done in MotionBuilder, I exported them from there and imported back into Maya and then rendered. The best feature I like in this software is its real time animation system. By using its real-time tools, I got instant playback of character

performances, alleviating the need to preview my animations frequently. Besides, it also provided a very powerful full body FK/IK manipulation rig. I created most major animations in MotionBuilder and then did some detail animations, such as fingers, facial animations in Maya. I found out this is the most efficient way for me to animate my characters for the movie.

Lighting and Rendering

I started with the most basic three-point lights: Key light, Fill light, and Back light. For the inside scene, I used spot light for floor lamps. Somehow I felt that the shadows of the lights were not so easy to control since I had many lights and shots, then I decided to edit the shadow effects in AfterEffects instead of here in Maya. I used a new feature in Maya- Render Layers system for my final rendering process. I rendered various parts of my scenes separately. It gave me more control over the final images. And I can manage my scenes by adding details and making changes to elements quickly and efficiently with Render Layers. When I needed to make a change, I didn't need to re-render the whole image. Instead, I simply needed to re-render the part of images that I wanted to change or just edit it in AfterEffects.

Special Effects

For characters' hair, I used Paint Effects in Maya. I found out that this system was very easy to use. What I needed to do was to make the objects paintable, and then choose a brush from presets in the visor, and finally edit it in settings. Moreover, it looked vivid and gave my characters more personal look.

Another important special effects that I needed to deal with in my movie was the scene of spilling coffee. I finally decided to create the fluid effect by another simulation tool: RealFlow. RealFlow is a very good product and one that I found

quick to learn. It was very interesting here to explore and learn how to use this program. There were many variables here to play with to optimize my scenes and then I can get the best results and realism. The speed of workflow compared to just using particle systems within Maya is pretty good and fast. The final result was also better and more realistic than Maya's particle system. I was very happy with the result of liquid simulating when it was done.

Postproduction

Sound Effects

I bought a royalty-free sound FX Library DVD from Digital Juice. I added some Foley effects and atmosphere to enhance my scenes. For the Café shot scene, I created a complete Café environment, from glasses tinkling and dinnerware clanking to the general hum of conversation, in order to convince the audiences that they are in a bustling Café shop. Other sound effects, such as characters' screaming, expressions of surprise, papers, and footsteps were used from this DVD too.

Music

Music always influences us throughout our daily life. It is especially important in movies or animations. I believe music can have many roles; it can add to the drama and emotion, glue things together, help things flow, etc.

The music songs in my movie were from the musical class of sound FX DVD and Stack Traxx High Impact Stacks DVD from Digital Juice. I used some musical sets from them, edited these in Premiere, and then put these songs in different scene segments in order to make the translations sound smoother, natural and match the mood well.

Compositing and Editing

I used AfterEffects to do most compositing and editing for this movie. Since my characters, background, and shadows were rendered separately, adjusting and changing each element or even various scenes became very easy to apply. The biggest changes I made in AfterEffects were to adjust the color of the shadows and I tried to make the color of each scene match well. The opening, logos, and the credits were also edited in AfterEffects.

Feedback

I was glad that I got some positive praises and suggestions as well from the audience during the screening. I was very happy that most of teachers and my friends told me they liked my story, and that the characters and texturing were very impressiv. One of my friends told me she felt really moved when the movie ended and she watched it again and again. One professor in my screening thought my editing was too fast in the beginning of the story and it might confuse people. I thought it was a very good suggestion for me because it is very important to give audiences a very clear introduction of setting and characters in the very beginning of the story.

Conclusion

I was really excited when my movie was screened in front of audiences at school. Finally I finished my own complete 3D computer animation work after several months' hard work. I experienced all these steps, from the very beginning preproduction process: Scriptwriting, Character Designing, Drawing the environments, Creating Storyboards, to the production process: Modeling, Texturing, Lighting, Animating, Rendering, and finally to the final Composting and Editing. In order to finish and enhance the quality of my movie, I also learned some programs, such as MotionBuilder, AfterEffects, RealFlow, and Premiere. I collected as many learning resources as possible, from internet tutorials, books, classes, to video tutorials for me to learn these new programs by myself. The learning process was very difficult, but it was definitely worth the time. Therefore I have learned many animation theories and 3D skills from doing this project. This is what I never expected before.

Appendix A

Original Thesis Proposal

The Free Gift

By Chia-Chi Cho
MFA imaging Arts & Computer Animation
School of Film and Animation
Rochester Institute of Technology

Running Time: 3 Minutes

the winter is cold, but something warm still exists somewhere
(the cold, cruel world vs. the warm human heart)

approved for submission and review

Skip Battaglia

Part1: The first meet

On a snowy morning, a boy named Takeshi is standing in front of a Japanese-style coffee shop. There is a very big and clear shop sign 'Java Dog's Café' in front. Takeshi, who wears a dog costume, is handing out the shop advertising materials to pedestrians. Beside him a half-monster looking creature, who is about 15 inches tall,

is helping him hold the big pile of advertisement flyers. This little creature's name is Maluco. He works with Takeshi in Java Dog's Café. Maluco keeps looking around and his eyeballs keep turning. His body is still, due to the big pile of papers that he carries. Meanwhile a girl, Minami, passes by and then enters the Java Dog's Café. The boy Takeshi keeps looking at the girl Minami through the clear café glass window. The creature Maluco puts his papers aside, and also looks through the window from outside. He sticks his face on the glass window and makes a wry face.

Part2: The conflict (Inside the café)

(The first time)

The boy Takeshi walks out of the kitchen. Now he is wearing the waiter's suit. He holds a plate with a cup of coffee on it. Near the corner of the wall, there is a huge shelf with several different kinds of dog-face masks on it. Maluco is dozing off on the shelf. When Takeshi walks in front of the shelf, Maluco makes the somniloquy and incautiously kicks off a dog mask. The dog mask falls just right on Takeshi's head. He tries to get rid of the mask but fails. At this moment Maluco wakes up and realizes that he has brought Takeshi a big trouble. Maluco jumps on Takeshi's shoulders and helps him to get rid of the mask with his all efforts. After the mask is loosened from Takeshi's head, it drops away. Later Takeshi and Maluco feel something wrong and notice that the mask has fallen on Minami's head this time. They feel embarrassed and look at each other.

(Later)

The boy Takeshi walks out again. He still holds a plate with a coffee on his hand. When he walks in front of the shelf, he looks back around to make sure that Maluco is not there. At this moment Maluco is chasing a fly in front. Then the fly stops on

Takeshi's one foot. Maluco grabs this great chance. He jumps high and treads on Takeshi's foot. Takeshi cries loud, and mindlessly spills the coffee on Minami's face. She cries out louder and leaves the café angrily. Takeshi is upset and watches Minami disappearing in the far.

Part3: A turning point

In the next morning around the same time, the girl Minami appears in front of the café again. The boy Takeshi is still handing out the advertising papers for the café shop with his dog costume on the street. When the girl Minami passes by Takeshi, he hurriedly hands a promo paper to her. However, Minami shakes her head and refuses him with a smile. After Minami walks away, suddenly, the creature Maluco grabs the promo paper from Takeshi's hand and runs to Minami. Minami stops her steps, accepts the paper from Maluco and takes a look at the paper. On the paper it shows the Java Dog's Café. In the center there is a big hand drawing gift picture. The information is printed in red color on it. It says, "3/26/2005 8:00 AM Place: In front of Java Dog's Café Free Mysterious gift (With bigger words)."

Part4: The Muse

(The scene will cut between Minami and Takeshi.)

The girl Minami is sitting inside the café and looking at the promo paper on her hand. Then the scene will cut to Takeshi, who is still handing out the advertising papers outside the café in the heavy winter snow. Then the scene will cut back to the girl Minami again. Meanwhile her focus is still on the paper in her hand.

Part5: The Truth

(03/26/2005 8:00 AM)

Minami, who is bringing the advertisement paper with her, appears in front of the Java Dog's Café. Takeshi and Maluco are already there. Takeshi gives Minami a little elaborate heart-shaped gift box when she approaches him. Minami receives the gift from Takeshi, gives him a sweet smile, takes a look at the gift, and then turns to leave. While Minami walks to the corner of the street, she notices 3, 4 pieces of advertising papers, which have been thrown away by people, are on the ground. She picks one of them and finds out the difference between this advertising paper and hers. On this abandoned paper, there is not any red colored 'free gift' word on it. She muses awhile and then turns back to look at Takeshi. Meanwhile Takeshi has already taken off his dog's mask. Minami looks at him and smiles pleasantly. Maluco, whose lower body is covered by snowflakes, is also smiling at this happy moment.

Thesis Timeline by Chia-Chi Cho

Spring 2004

- Week1*** Concept-Treatment
- Week2*** Concept-Treatment
- Week3*** Concept-Treatment Finish
- Week4*** Refine-Treatment
- Week5*** Refine-Treatment
- Week6*** ***Class Feedback***
- Week7*** Final Script
- Week8*** ***Thesis Proposal***
- Week9*** Refine-Treatment
- Week10*** ***Thesis Proposal***; Storyboard & Design

Summer 2004

- Week11*** Character Design (1)
- Week12*** Character Design (2)
- Week13*** Character Design (3)
- Week14*** Character Design (4)
- Week15*** Character Modeling (1)
- Week16*** Character Modeling (2)
- Week17*** Character Modeling (3)
- Week18*** Character Modeling (4)
- Week19*** Character Modeling (5)
- Week20*** Character Rigging (1)

Fall 2004

- Week21*** Character Rigging (2)
- Week22*** Character Rigging (3)
- Week23*** Texture (1) ; Early Sound (Click track, etc.) (1)
- Week24*** Texture (2) ; Early Sound (Click track, etc.) (2)
- Week25*** Texture (3)
- Week26*** Texture (4)
- Week27*** Environment Set (1)
- Week28*** Environment Set (2)
- Week29*** Environment Set (3)

Week30 Lighting & Texturing (1)

Winter 2004

Week31 Lighting & Texturing (2)

Week32 Lighting & Texturing (3)

Week33 Character Animation (1) – Part1

Week34 Character Animation (2) – Part1

Week35 Character Animation (3) – Part2

Week36 Character Animation (4) – Part2

Week37 Character Animation (5) – Part3

Week38 Character Animation (6) – Part4

Week39 Character Animation (7) – Part4

Week40 Character Animation (8) – Part4

Spring 2005

Week41 Render (1)

Week42 Render (2)

Week43 Render (3)

Week44 Particle (1)

Week45 Particle (2)

Week46 Composition & Edit

Week47 Music & Soundtracks (1)

Week48 Music & Soundtracks (2)

Week49 Rerender

Week50 *Transfer to Tapes, DVDs*

Thesis Budget by Chia-Chi Cho

<i>Description</i>	<i>Per Unit Cost(\$)</i>	<i>Amount</i>	<i>Estimate Expense</i>	<i>Actual Expense</i>
Research			300	300
Storyboard			1000	50
Art Supplies			400	400
Paper	40	5 reams	200	200
Layout			1000	100
Character Design	70	3	210	20
3D Character Modeling	500	3	1500	30
3D Character Animation			6000	80
Texturing			500	300
3D Background			2000	20
Sound Track			500	0
Composition			300	30
Software			9000	0
Digital Camera	550	1	550	550
DVDs	1	20	20	20
Removable HD	250	1	250	250
WorkStation	2500	1	2500	0
DVCam Tapes	10	4	40	40
<i>Total(\$)</i>			<i>\$26270</i>	<i>\$2390</i>

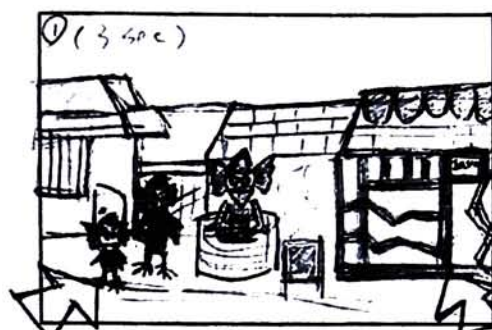
Appendix B

Complete Storyboard

<Scene 1>

"The Free Gift"

Chia Chi Chi



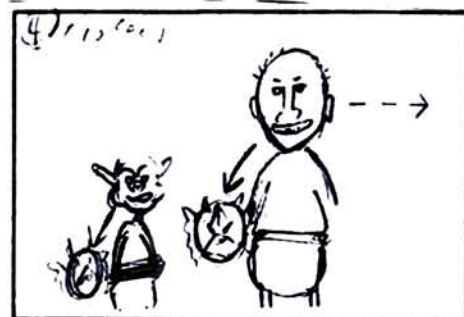
① (3 sec)
Camera push in
"Teva Diner's Cafe"
Flyer



② (4 sec)
Takeshi + Maluco
Heading out the advertising
flyers



③ (2 sec)
Maluco is turning his eyeballs
See around



④ (1.5 sec)
Takeshi and Maluco take off
the masks of the cooking 'Mascot'
volcano



⑤ (1.5 sec)
Minami passes by + enter the
Cafe



⑥ (4 sec)
Closest Minami (in Cafe)

then
at end of the...



Takeshi + Maluco: Take off masks
Watching Minami from the
window glass

Scene 2



Takeshi holds a plate with coffee
or it



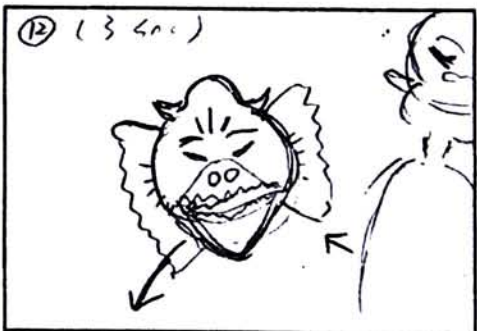
Maluco crawls up to
the shelf



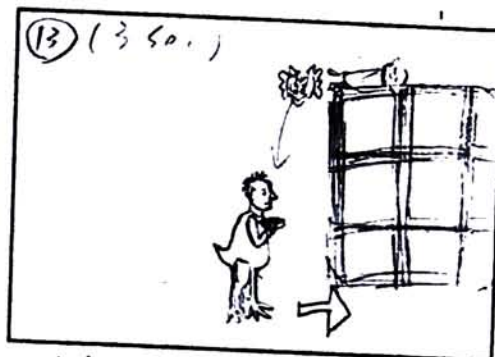
Close up of Takeshi



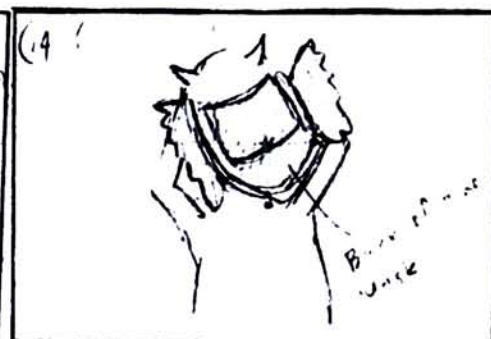
Maluco puts his nose on the
mask and sees it's
... off



Maluco kicks the mask off
when he is sleeping, the mask
falls off



Maluco kicks off his mask
When Takeshi passes by



The Mask falls down on Takeshi's
head: he tries to get rid of it



Maluco wakes up and looks
down. Camera follows down



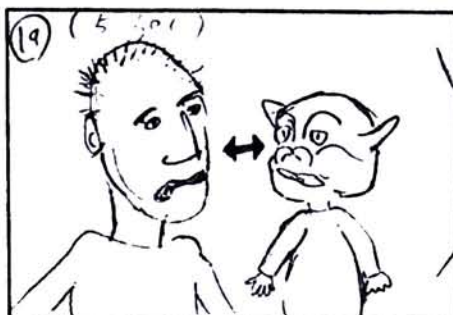
Maluco jumps down from the
shelf and then jumps on Takeshi,
trying to help him



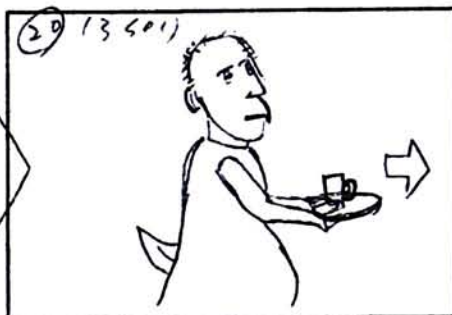
Finally they get rid of the
mask; They feel relaxed now



The mask is on Mirami's head
now



Takeshi and Maluro look at each other and feel embarrassed



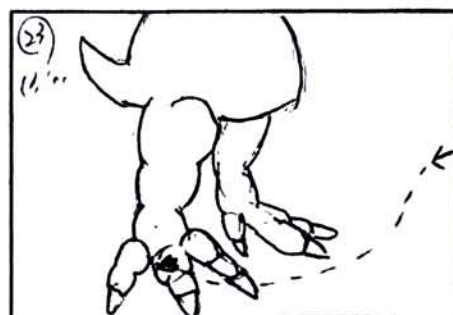
Again Takeshi appears, with coffee in his hand



He makes sure that Maluro is not on the shot this time



But Maluro appears in front, chasing a bug



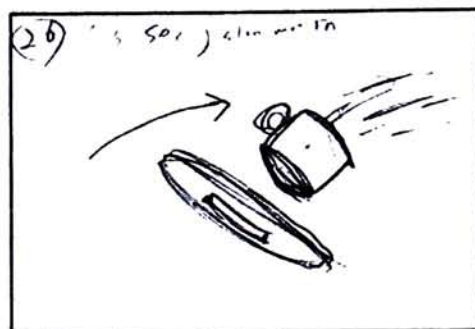
The bug steps on Takeshi's foot



Maluro jumps up and treads on Takeshi's foot fiercely



Take a look at this



10-100 cup balls



John is stunned



John is in the room
John is in the room
She is in the room



John is in the room
John is in the room



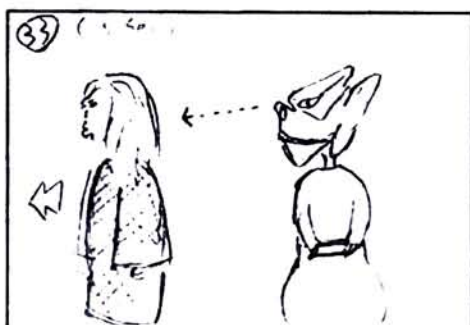
John is in the room
John is in the room



Takeshi raises the pipe to Minami



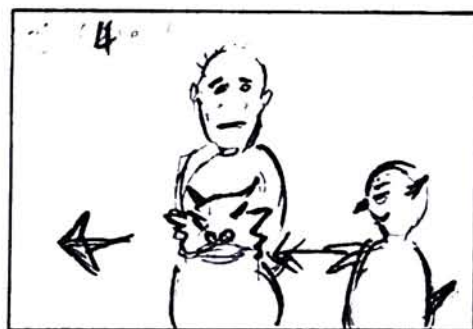
Minami looks at it and refuses it



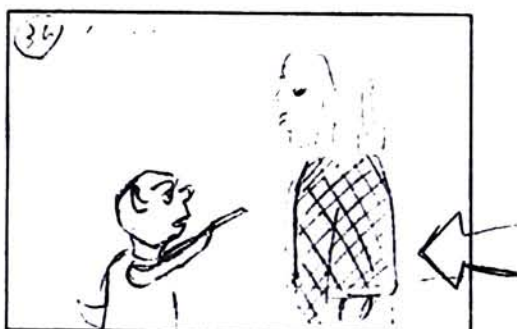
She walks away and Takeshi keeps looking at her



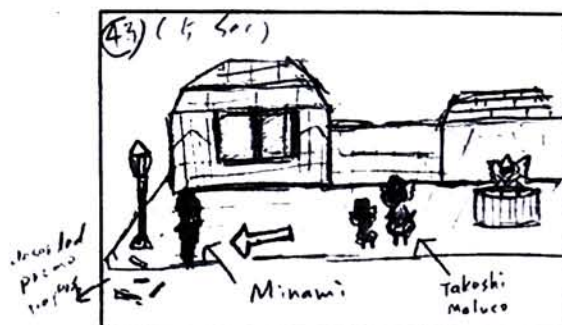
Takeshi takes off the mask and feels sad



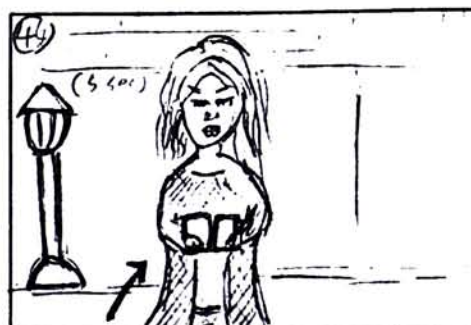
They both look at each other



He gives the pipe back and goes to the car



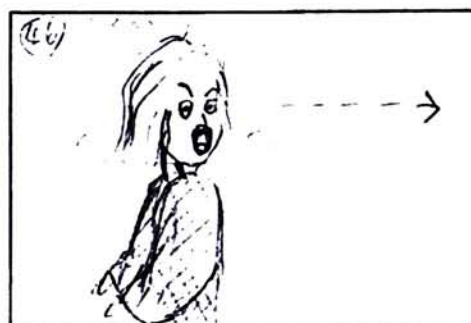
When she walks to the corner of the street she notices some papers being thrown away by others on the ground



She picks up one and looks at it



Looking at the promo without the 'Free Gift' words



She feels suspicious and looks back to Takeshi



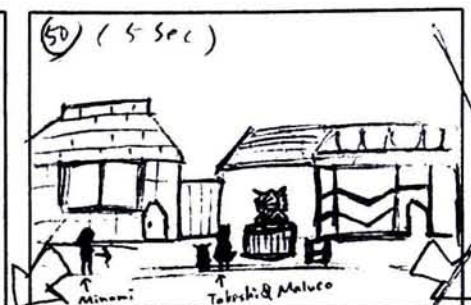
Takeshi is smiling at her, with the mask on his head



Maluco, who stands beside Takeshi, smiles to Minami too



Mirami now realizes and
snaps back



The outside of Cafe
Mirami moves back slowly

Mirami walks slowly
to Takeshi

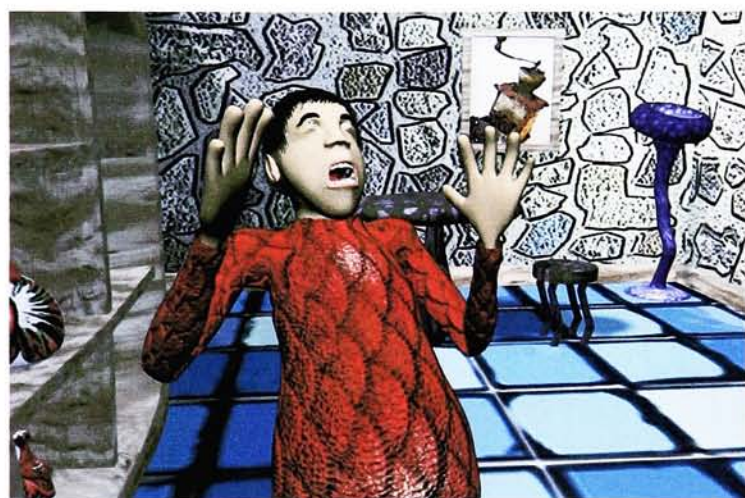
chia-chi cho
Rochester Institute of Technology
08/31/2006

Chia-Chi Cho

Appendix C

Production Stills



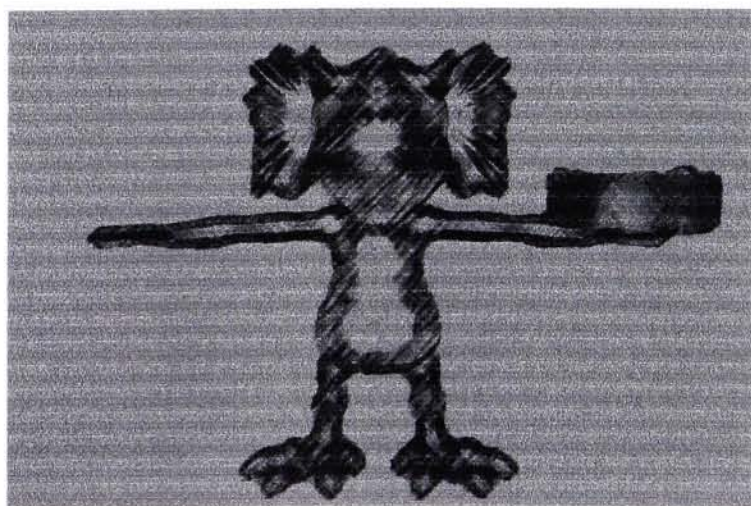
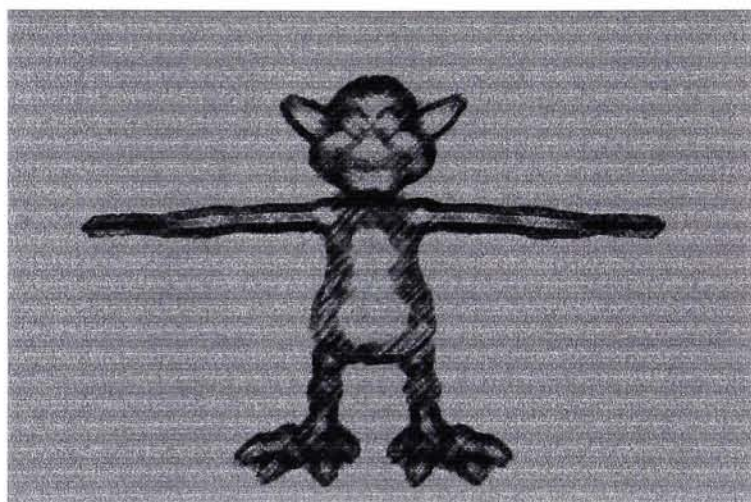
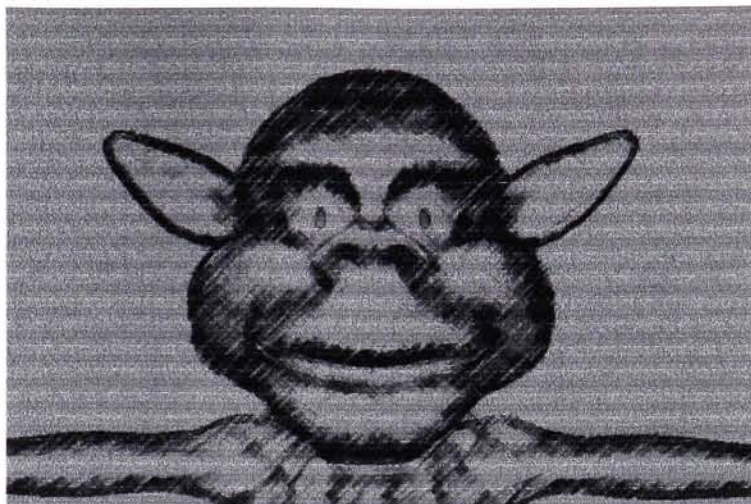


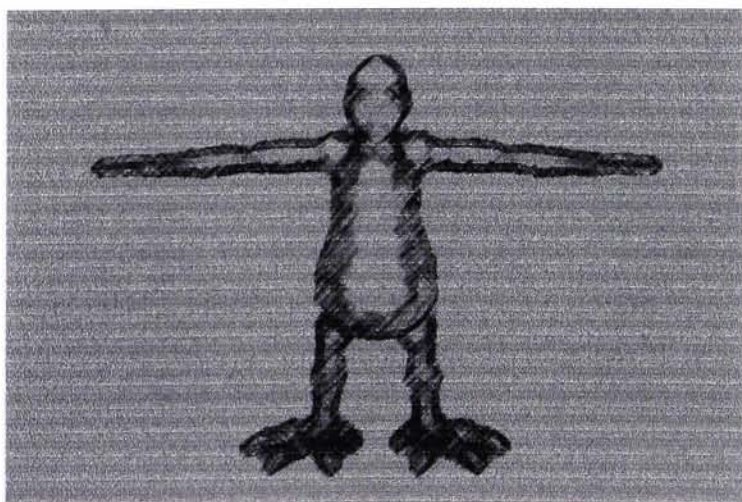
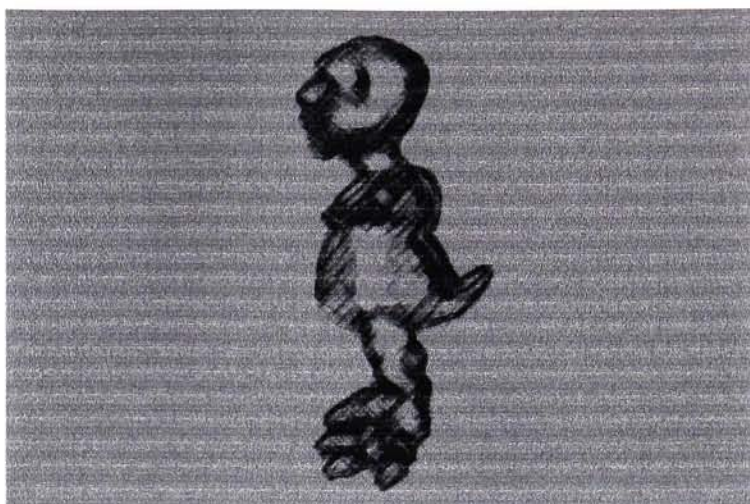


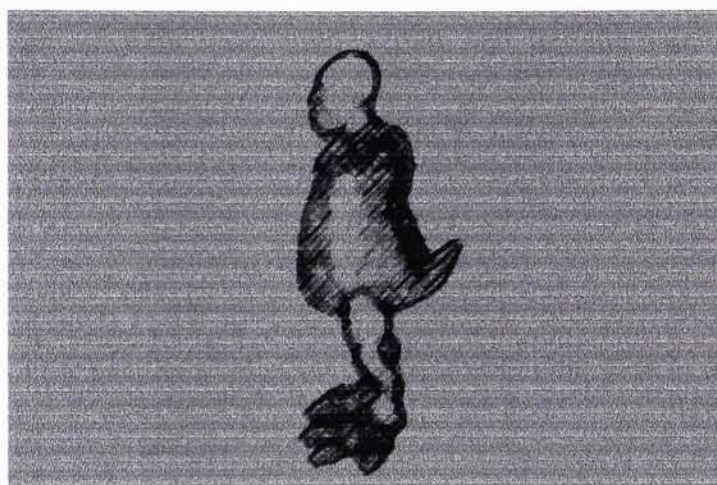
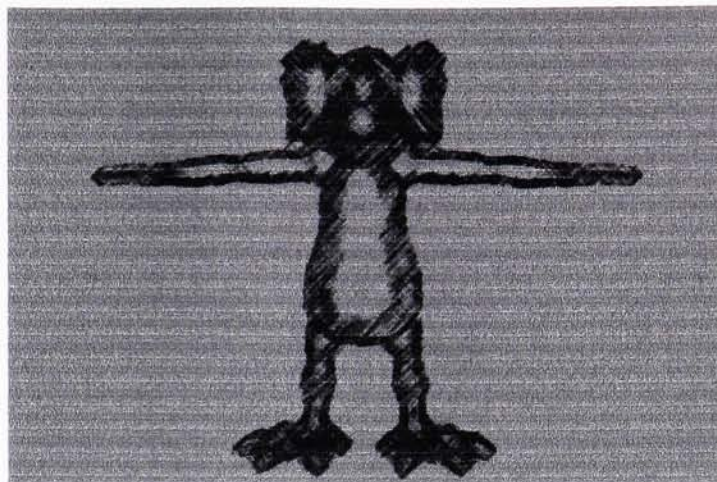


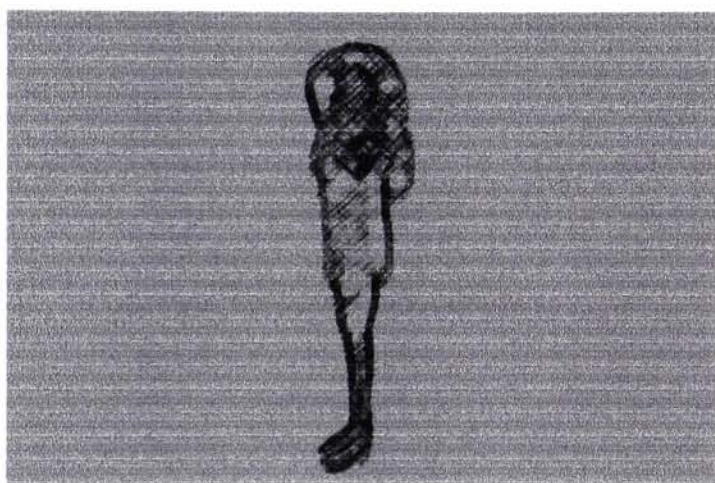
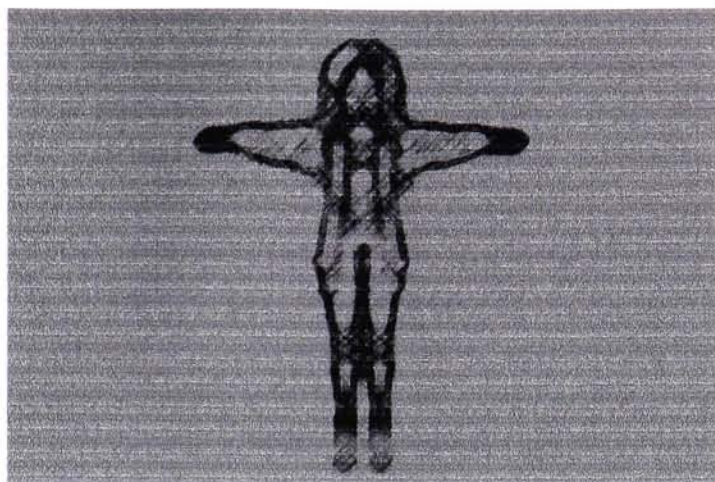
Appendix D

Character Design Drawings









Appendix E

Production Credits

Produced by Chia-Chi Cho

Music by Digital Juice

Sound Effects by Digital Juice

Faculty Advisors:

Skip Battaglia

Duane Palyka

Aharon Charnov